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Interstate 5 and the Peripheral Canal in San Joaquin and Sacramento Counties, California. CED-78-65; B-164497 (3). March 10, 1978. 2 pp. + 5 appendices (24 pp.).

Report to Rep. George Miller; by Henry Eschwege, Director, Community and Economic Development Div.

Contact: Community and Economic Development Div.

Budget Function: Commerce and Transportation: Ground Transportation (404).

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Congressional Relevance: Rep. George Miller.

Authority: Friends of the Earth v. Brinegar, Civ. No. 73-2184 (N.D. Cal. 1974). H.R. 9258 (95th Cong.). 23 U.S.C. 104(b). 23 U.S.C. 120 (c).

Over half of Interstate 5 (I-5), the principal north-south route on the west coast of the United States, is located within California. In October 1976, the Department of Transportation classified about 22 miles of I-5 in California's San Joaquin and Sacramento Counties as one of the essential gaps of the Interstate Highway System. At present, about 7 miles of the 22-mile segment have been completed and opened to local traffic, and work on the remaining 13 miles is underway. Findings/Conclusions: The entire 22-mile I-5 segment has been controversial, primarily because of environmental issues raised in early 1971 which culminated in legal action. The legal action, which was unsuccessful, was an attempt by environmentalists to halt plans to obtain landfill material (borrow) from the proposed Peripheral Canal for I-5 projects. The legal action did not oppose completion of the highway. Although legislation is pending, neither the State nor the Federal Government has given final approval for Peripheral Canal construction. The State estimates that all work on the segment will be completed by the fall of 1979. The estimated total cost of constructing the segment is \$48.5 million, with the Federal share estimated at \$43.7 million and the State share estimated at \$4.8 million. (RRS)

5654

REPORT BY THE U.S.

# General Accounting Office

## Interstate 5 And The Peripheral Canal In San Joaquin And Sacramento Counties, California

GAO obtained information on allegations that construction of the proposed Peripheral Canal had begun in connection with the construction of a segment of Interstate 5 in California.

--In March 1975, the U.S. Court of Appeals ruled that a portion of the proposed canal's right-of-way could be used as a fill material (borrow) site for Interstate 5 projects. Use of the site would not constitute construction of the canal, according to the ruling.

--Neither the State of California nor the Federal Government has formally approved the canal's construction. Legislation is pending in the Congress and the State.

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UNITED STATES GENERAL ACCOUNTING OFFICE

WASHINGTON, D.C. 20548

COMMUNITY AND ECONOMIC  
DEVELOPMENT DIVISION

E-164497(3)

The Honorable George Miller  
House of Representatives

Dear Mr. Miller:

This report is in response to your October 26, 1977, letter and subsequent meetings with your office, regarding allegations that construction of the Peripheral Canal, around the San Joaquin-Sacramento Delta, had begun in connection with the construction of a California Interstate Highway 5 (I-5) segment. Based on agreements reached with your office, we are providing information on the following matters:

- Amount of Federal money spent in obtaining highway fill material (borrow) from the proposed canal site, including funding source and legislative authorization.
- Costs of digging borrow pits to canal specifications and whether this practice is consistent with Federal highway construction procedures.
- Maintenance of borrow pits after digging is completed.
- Potential subsidy to water contractors if canal is constructed.

This report discusses the history and status of the 22-mile I-5 segment and the Peripheral Canal, and covers the environmental impact statements and court decisions involving the highway and the canal projects. Report details are presented as appendix I.

Our review showed that in 1964 the San Joaquin County Flood Control and Water Conservation District and the county's Advisory Water Commission requested coordinated construction of the highway and proposed canal. Formal agreements between California's Department of Transportation (formerly Department of Public Works) and the Department of Water Resources for the projects' coordination

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were not finalized until January 1968. The Federal Highway Administration approved the Peripheral Canal site as the borrow site for construction of a 22-mile section of I-5 in San Joaquin and Sacramento Counties in August 1967 and January 1968, respectively. Friends of the Earth and other environmentalists subsequently challenged this decision in court in December 1973. The U.S. Court of Appeals, in March 1975, however, ruled that a portion of the proposed canal's right-of-way could be used as a highway borrow site and its use would not constitute construction of the canal.

Neither the State nor the Federal Government has given formal approval for the canal's construction; however, legislation is pending in the Congress and the State of California.

As of January 1978, about 7 miles of the 22-mile section of I-5 had been completed and opened to local traffic. Work on the remaining 15 miles was underway. The State of California estimates that all work on the segment will be completed by the fall of 1979. Federal and State costs are estimated at \$48.5 million.

As you requested, the names of organizations and individuals we contacted in conducting this review are included in this report as appendix V.

At your request, we did not take the additional time needed to obtain written agency comments on the matters discussed in this report.

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 15 days from the date of the report. At that time we will send copies to interested parties and make copies available to others upon request.

Sincerely yours,



Henry Eschwege  
Director

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### ABBREVIATIONS

CAL TRANS	California Department of Transportation
DWR	Department of Water Resources
EIS	environmental impact statement
FHWA	Federal Highway Administration

DESCRIPTION AND CURRENT STATUSOF INTERSTATE 5 AND PERIPHERAL CANAL PROJECTSINTRODUCTION

Interstate 5 (I-5) is the principal north-south route on the west coast of the United States, extending approximately 1,382 miles from Canada, north of Bellingham, Washington, to Mexico, south of San Diego, California.

Over one-half of I-5 (approximately 797 miles) is located within California. According to Federal Highway Administration (FHWA) records, construction work on I-5 started in September 1951.

In October 1975 the Department of Transportation classified about 22 miles of I-5 in California's San Joaquin and Sacramento Counties as one of the essential gaps of the Interstate Highway System. At present, about 7 miles of the 22-mile segment have been completed and are open to local traffic. Work on the remaining 15 miles is underway.

The entire 22-mile I-5 segment has been controversial, primarily because of environmental issues raised in early 1971 which culminated in legal action. The legal action, which was unsuccessful, was an attempt by environmentalists to halt plans by the California Department of Transportation (CAL TRANS) to obtain landfill material (borrow) from the proposed Peripheral Canal site for the I-5 projects. The legal action, however, did not oppose the highway's completion.

The following sections describe the 22-mile I-5 segment and the proposed Peripheral Canal, and discuss environmental impact statements (EISs) and the court case.

Description and current  
status of 22-mile I-5 segment

According to Federal Highway Administration records, the 22-mile I-5 segment was initially planned in the mid-1950s.

In San Joaquin County, the highway will consist of a six-lane freeway between Fammer Lane and State Route 12, and a four-lane freeway between Route 12 and the San Joaquin-Sacramento County line, totaling 17 miles.

In Sacramento County, the highway will consist of a four-lane freeway from the San Joaquin-Sacramento County line to Lambert Road, a distance of about 5 miles. (See map on p. 3.) Construction on the 22-mile segment started in 1974. The work was divided into five highway construction projects.

As of January 30, 1978, two of the five projects within the controversial 22-mile I-5 segment were complete and open to local traffic. Highway Administration officials advised us that construction on another project is essentially completed and open to local traffic, but the contractor's work has not been formally reviewed and accepted. The two remaining projects are under construction. Both Highway Administration and CAL TRANS officials stated that recent heavy rains in California have delayed the projects. CAL TRANS estimates that all work on I-5 will be completed by the fall of 1979.

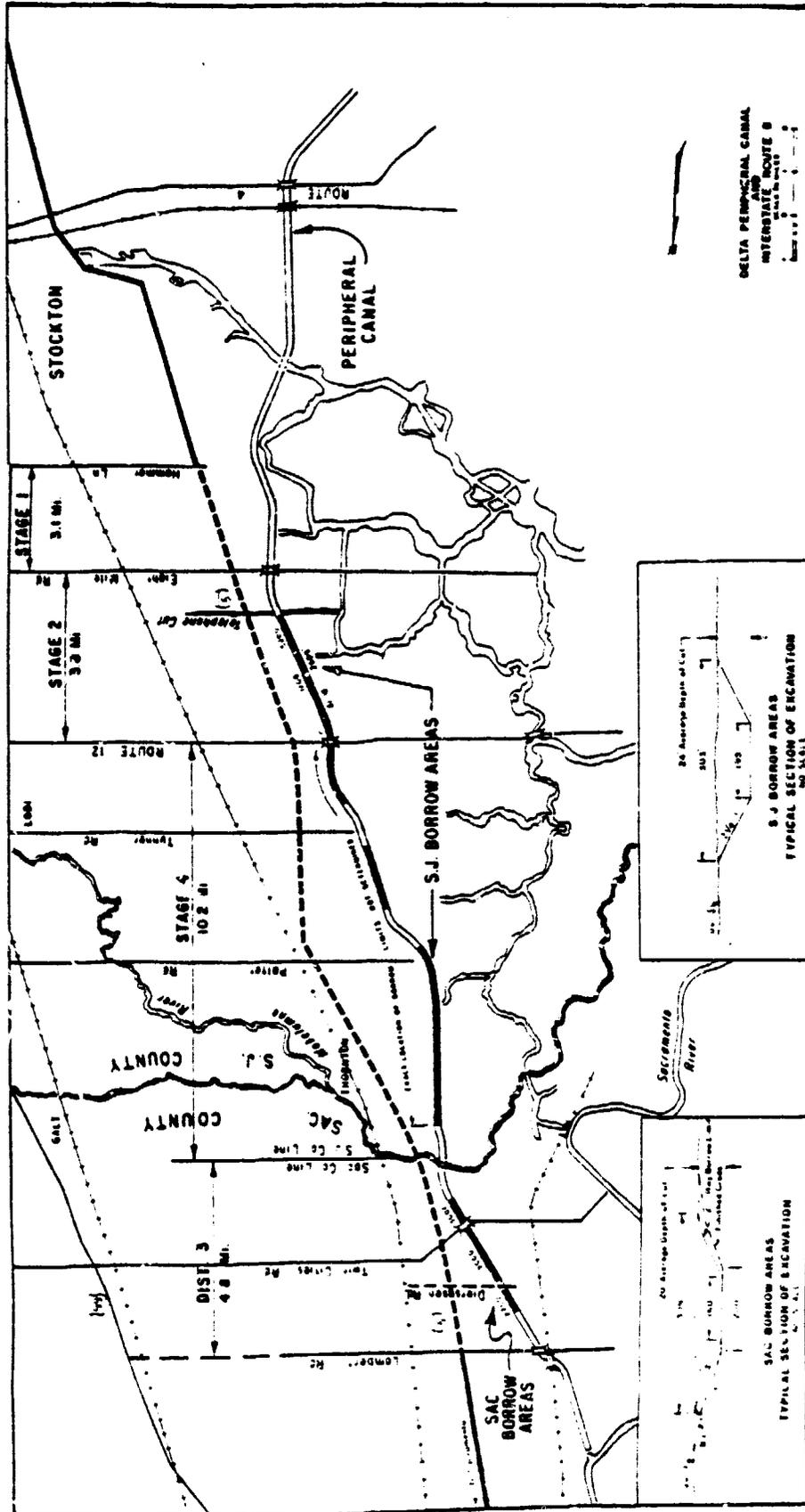
The Highway Administration, on the basis of testimony received at 1966 public hearings regarding the proposed Peripheral Canal and an evaluation of the benefits of coordinating the I-5 and canal projects, approved the use of the canal alignment on August 30, 1967, as a mandatory borrow site for construction of the 22-mile I-5 segment. A chronology showing the major events in the development of the I-5 segment is shown as appendix II.

Description and current status  
of proposed Peripheral Canal

The California Department of Water Resources (DWR) proposes to construct the Peripheral Canal as an integral feature of the California State Water Project. The proposed canal would carry water from the Sacramento River to existing aqueducts of the State Water Project and the Federal Central Valley Project, and to 12 water release facilities built into the canal where it crosses waterways in the Sacramento-San Joaquin Delta. <sup>1/</sup> The release facilities would be used to distribute Sacramento River

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<sup>1/</sup>About 738,000 acres situated near the center of California's central valley at the confluence of the Sacramento and San Joaquin Rivers.



water throughout the delta. DWR's current estimated cost of constructing the canal is \$515 million.

According to DWR plans, the canal would be a 43-mile earth channel, 400 to 500 feet wide and 20 to 30 feet deep, with levees on both sides. The canal would be located along the eastern perimeter of the delta. As currently planned, it would start at the Sacramento River about 18 miles south of the city of Sacramento, progress in a southeasterly direction toward the city of Stockton, cross the San Joaquin River about 5 miles west of Stockton, then continue in a southwesterly direction and terminate at the State and Federal pumping plant facilities for the California Aqueduct and Delta-Mendota Canal. The proposed canal generally parallels the I-5 alignment, about 2 miles to the west.

Although legislation is pending, neither the State nor the Federal Government has given final approval for Peripheral Canal construction. There has been no congressional action on proposed Federal legislation to authorize the Peripheral Canal 1/ since its introduction on September 22, 1977. Interim actions on the State's proposed legislation 2/ occurred on January 26, 1978, and February 1 and 2, 1978.

According to a DWR official, the Joint Conference Committee of the California Legislature on January 26, 1978, approved a report on the bill 2/ to authorize construction of the Peripheral Canal with suggested final amendments. On February 1, 1978, the amended bill was submitted to the California State Senate. The DWR official stated that California legislative procedures require that the amended bill be approved by the senate, where it originated, by a vote of two-thirds or more. Following senate approval, the bill must also be approved by the State assembly by two-thirds vote, before the amended bill can be submitted for the Governor's approval. On February 2, 1978, the senate approved the amended bill, but with less than the majority needed to send the bill to the State assembly. The senate agreed to a proposal, however, to reconsider the bill at a later unspecified date.

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1/H.R. 9258, 95th Cong., 1st Sess. (1977)

2/California Senate Bill 346, Feb. 18, 1977

The Bureau of Reclamation is currently reassessing the canal's economic feasibility, design, and operation criteria to revise its September 1968 "Peripheral Canal Unit Feasibility Report." The Bureau of Reclamation is also developing a draft EIS on the proposed project's effects. A Bureau of Reclamation official advised us that the reports will be finalized about July 1979 and that Reclamation will not be in a position to make a recommendation to the Congress regarding the canal until the reports are completed.

Appendix III contains a chronology of the canal's development.

#### Highway environmental impact statements

Two final EISs were issued on the 22-mile I-5 segment. One statement, approved by the Federal Highway Administration on June 5, 1972, refers to the portion of I-5 in San Joaquin County. The second EIS, approved March 24, 1975, refers to the portion in Sacramento County. Both statements refer to the Peripheral Canal as the preferred site for obtaining borrow material.

The 1972 EIS states that about 7.5 million cubic yards of material required for embankment construction are planned to be obtained from within the alignment of the proposed Peripheral Canal. This EIS indicates that the use of the canal as a borrow site will result in estimated savings of \$9.8 million in Federal and State highway funds, and an additional \$4 million in other public funds if the canal is built. The EIS discusses special measures to be employed at the borrow sites, including fencing to prevent unsafe public use; mosquito, weed, and erosion control; maintenance by the State Department of Public Works; and use of the excavated areas as interim warm water fish production facilities.

The 1972 EIS discusses in detail five alternative sources of embankment material that had been considered. The EIS concluded that only the Peripheral Canal site and one of the other alternative sites were suitable for off-highway hauling, which is preferred to reduce wear and tear on local roads and hazardous truck traffic.

The 1972 EIS included a schedule summarizing estimated costs of using the canal and seven alternative

sites, as well as additional information on one-way haul distances from the borrow sites to the highway site, and quantities of borrow material available at each site. The Peripheral Canal site had the shortest one-way haul distance, 1 mile, and was the least expensive borrow material source, with an estimated cost of 80 cents per cubic yard. Haul distances for the seven alternative sites ranged from 6 miles to 22 miles. The estimated cost of borrow materials at the sites ranged from \$1.06 per cubic yard to \$3.52 cents per cubic yard. The available quantity of borrow material at four of the seven alternative sites was shown to be less than the 7.5 million yards of material required for the project.

The 1975 EIS discusses the Peripheral Canal and three alternative borrow sites, and concludes that the canal right-of-way is the preferred borrow site. In the event that the canal right-of-way is not available, the other three sites could be used, according to the EIS.

According to the EIS, the canal site had been determined to be the best alternative on the basis of information received from public hearings and evaluation of benefits to be derived. Benefits cited in the statement included

- the possibility of saving a substantial amount of public funds by coordinating the two projects;
- not having the borrow hauled over public roads, thereby providing a higher degree of public safety, less noise, less dust disturbance, lower road maintenance costs, and less fuel consumption; and
- use of borrow sites to enhance recreational opportunities which are not now available.

The only adverse impact cited for using the canal as the borrow site was the elimination of 109 acres of farmland.

Both environmental statements made reference to a November 22, 1965, request from the Boards of Supervisors of Sacramento and San Joaquin Counties that the canal and highway facilities be coordinated to minimize impact. Both statements also refer to a 1968 inter-agency agreement signed by the Public Works and Water Resources Departments for removing borrow material from

portions of the canal right-of-way so that a series of elongated ponds would be formed. The ponds are described as a series of excavations about 9.5 miles long, 24 feet deep, and 300 feet wide. A subsequent memorandum of understanding between the Departments of Water Resources and Fish and Game for maintaining the ponds and stocking them with fish was also mentioned in both statements.

Court rulings on highway EIS permit  
use of canal site as borrow source

On December 7, 1973, Friends of the Earth and other environmentalists filed a civil suit in the U.S. District Court, Northern District of California, challenging the Highway Administration decision to obtain borrow material for the I-5 segment from the Peripheral Canal site. The suit contained two basic arguments for which judicial decisions were made.

In the first argument, the environmentalists contended that the highway EIS was inadequate because all reasonable alternative borrow sites for the fill were not considered.

In the second argument, the environmentalists stated that the proposed excavations would constitute construction of the canal project before requirements for a formal evaluation of the canal's environmental impact are met. They argued that such an evaluation must be made prior to any further construction work on the I-5 segment, as part of a revised highway EIS or as a separate statement dealing with the canal project. The environmentalists claimed that highway project specifications would involve excavation of one-third of the canal's water course and that excavations of this magnitude would seriously influence a decision in favor of the canal's completion.

The district court ruling in May 1974 permitted State use of borrow material from the proposed Peripheral Canal in constructing I-5. 1/ The environmentalists

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1/Friends of the Earth v. Brinegar, Civ. No. 73-2184  
(N. D. Cal., filed May 31, 1974).

appealed the decision in August 1974. In March 1975 the United States Court of Appeals, Ninth Circuit, upheld the district court decision. 1/

The appeals court ruled that:

"We uphold the district court's determination that the EIS for the I-5 project adequately discussed those alternative borrow sites which were reasonably available, and adequately considered the environmental impact of the proposed excavations."

The appeals court also ruled in favor of the district court conclusion that the highway and canal projects should stand by themselves for purposes of environmental review. The appeals court gave the following rationale for this decision:

- The highway project EIS noted that contingent plans had been made for use of the excavation sites, should the canal fail to be approved for any reason.
- Even if the excavations are allowed to proceed, the public and the Congress will have full opportunity to evaluate the wisdom of the contemplated water transfer scheme before it takes place.
- Since an EIS will be required before any work on the canal beyond the highway fill excavation can be done, requiring the EIS now would serve no useful purpose, but would delay the highway project considerably.

Highway Administration and CAL TRANS officials advised us that the environmentalists had the option of appealing this matter to the Supreme Court but did not take this course of action.

#### Fund authorization

The Interstate Highway System, including I-5 in California, is authorized under section 103(e) of title

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1/Friends of the Earth v. Brinegar, Civ. No. 73-2184 (N. D. Cal., filed May 31, 1974), aff'd sub nom., Friends of the Earth v. Coleman, Civ. No. 74-2755 (9th Cir., filed Mar. 10, 1975).

23 of the United States Code. The various Federal-Aid Highway Acts contain the annual sums of money authorized for the Interstate highway program. The Federal Highway Administration apportions, or divides, the sums authorized for the Interstate highway program among the States. This apportionment is based on a formula prescribed in section 104(b)(5)(A) of Title 23, U.S.C. Each State's share of the Interstate System is based on the Federal share to complete the system relative to the total, nationwide cost of completion. The Federal Government does not generally pay for the entire cost of constructing Federal-aid highways, including Interstate highways. For Interstate highways the Federal share is about 90 percent (23 U.S.C. 120(c)).

Federal funds spent in  
digging borrow materials

Borrow material was needed to construct the 22-mile I-5 segment about 8 to 11 feet above flood level. Our analysis of the five highway construction contracts awarded for the 22-mile I-5 segment indicated that about 8.9 million cubic yards of borrow material was removed from the canal site and deposited at the highway site. (See app. IV.) The total cost of doing this work, termed roadway excavation, was about \$12.8 million, of which about 91 percent, or \$11.6 million, was the Federal share. This amount, however, reflects more than the cost of digging the borrow pits. For example, it includes the cost of excavating the borrow material, loading, hauling, depositing, spreading, and compacting the material in place at the highway construction site, as well as all labor, materials, tools, and equipment.

Project records do not provide cost breakdowns for each phase of roadway construction work. For this reason we asked officials of the Highway Administration, CAL TRANS, and several highway contracting companies to estimate the percentage of the \$12.8 million attributable to the excavation at the canal site. These officials told us they could not provide such estimates because each borrow operation is unique due to varying land types, shapes, and contents. To apply a single estimate to all five projects would be misleading, according to officials. CAL TRANS officials advised us that an estimate might be made for an individual project if the contractor performing the work maintained detailed

records on all roadway excavation work. Several contractors told us they do not maintain detailed records.

We also compared the excavation costs for I-5 projects, for which borrow material was obtained from the canal site, with the costs for another I-5 project for which another borrow material source, determined by the contractor, was used.

Appendix IV contains a cost data summary for the five I-5 projects using canal site borrow material. Contractors' fees for performing the roadway excavation work on the five projects were based on the amount of borrow material to be excavated. These fees ranged from \$0.50 to \$2.11 per cubic yard, averaging \$1.30. In contrast a contractor-determined borrow material source was used for a 1973 I-5 project. The contractor's fee for about 2.2 million cubic yards of borrow material was \$0.90 per cubic yard. Using the Highway Administration price index for excavation work, we determined that \$0.90 in 1973 would be about \$1.28 in 1976 dollars. It appears, then, that the cost of the material from the canal borrow site was comparable to the cost of similar material when contractor-determined borrow sites were used.

Because the borrow material obtained from the canal site was provided by California's DWR at no cost to the highway project, we asked officials of the Highway Administration and CAL TRANS and a highway contractor why the average cost of excavation work for projects involving the canal site was not considerably less than for projects for which the contractor had to purchase the borrow material. These officials said that the digging performed at the canal site was below sea level, to conform to borrow pit depth specifications. They said this procedure required contractors to use pumping operations and probably offset any cost savings attributable to the free material.

#### Procedures for digging pits to specifications and additional costs

CAL TRANS' standard specifications for highway construction require that when the contractor is not given a choice of the borrow material source, the borrow will be excavated to the lines and grades established by the State Highway Engineer. Otherwise, the contractor is permitted to make his own arrangements for obtaining and

excavating the borrow material; however, there are certain requirements. For example, the contractor must obtain certain permits, and have the material tested and approved by the State Highway Engineer before beginning excavation work. The contractor must also perform certain erosion prevention measures at borrow site locations either concurrently or immediately following excavation work.

In the case of borrow operations at the Peripheral Canal site, Highway Administration and CAL TRANS officials told us the highway plans contained specific construction details for each borrow pit, including average depth of the excavation, bottom and top widths, side slopes measurements, and exact pit location. They advised us that these borrow pit specifications were developed by DWR and subsequently approved by both CAL TRANS and the Federal Highway Administration. DWR, CAL TRANS, and Highway Administration officials told us the pits were dug within the canal prism but not to exact canal specifications. They said additional material would have to be removed and specific shaping would be required if the canal is constructed.

CAL TRANS and Highway Administration officials told us it is rare to have borrow pits dug in this manner. According to these officials, contractors have been known to dig pits to landowners' specifications, such as for lakes or ponds, in exchange for certain amounts of borrow material required for their construction projects.

It does appear that digging the Peripheral Canal borrow pits resulted in some additional costs. We were unable, however, to determine the amount of such costs because of the way highway construction project records are maintained. (See p. 9.) CAL TRANS and Highway Administration officials stated that digging the pits to specifications resulted in certain additional costs. The officials were reluctant to provide estimates of the additional costs, but believed them to be negligible. According to the officials, the "free" borrow material and reduced hauling costs probably offset additional costs the contractors incurred due to pumping operations. One CAL TRANS official told us that the contractors were permitted to leave the pits open, without having to do the additional grading and sloping normally required. This technique would also help offset additional costs of digging to specifications.

Highway contractors familiar with the I-5 controversy told us the cost of digging pits to specifications is

higher than if no specifications existed. However, they said that since there was no alternative borrow source nearby, within 25 miles for example, the extra digging and pumping costs were probably offset by not having to haul borrow material from longer distances to the highway site.

Maintenance arrangements  
at completed borrow pits

In January 1968 the California Departments of Water Resources and Fish and Game approved a memorandum of understanding in which they assumed maintenance responsibilities for the completed Peripheral Canal borrow pits.

The agreement recognized that the borrow pits, which naturally fill with ground water seepage, may be used to supplement fish production, or to provide public fishing, or both. The memorandum of understanding also provides that if the borrow ponds are expected to remain for a period of at least 3 years prior to the canal's construction, or if the canal is not built, the Department of Fish and Game will stock the ponds with fish and maintain fisheries. It also provides that DWR be responsible for maintenance costs that otherwise would be incurred. DWR officials told us that no Federal funds are used to maintain the borrow pits.

DWR and CAL TRANS officials told us there will be a total of 13 borrow pits when work is completed--4 in Sacramento County and 9 in San Joaquin County. Currently, five borrow pits--all in San Joaquin County--have been completed and stocked with fish by the Department of Fish and Game. CAL TRANS has officially released two completed borrow pits to DWR.

DWR officials told us they are now in the process of planning and developing a report on interim recreational facilities at five San Joaquin County borrow pits. According to the officials, these facilities will soon be open to the public for fishing, hunting, and picnicking.

Construction work has not begun on the interim recreational facilities, but DWR officials told us they hope to have such work underway at five borrow pit locations by late 1978. These facilities, described by the officials as "minimal," will include gravel access roads --formerly borrow material haul roads--parking facilities,

portable sanitary facilities, trash receptacles, and fishing sites. In addition, signs will be purchased to identify the locations, and areas adjacent to the ponds will be seeded with grass. DWR's preliminary cost estimate for the facilities at the five sites is \$60,000. A DWR official advised us that the entire \$60,000 will be provided by the Water Conservation Board, a part of the Fish and Game Department. The official stated that maintenance and operation cost for the five facilities will be about \$15,000 a year for 3 years, with Fish and Game providing most of the funds. No Federal funds are involved.

#### Potential subsidy to water contractors

As discussed on page 9, Highway Administration project records do not provide information necessary to identify specific costs attributable to borrow pits at the Peripheral Canal site. CAL TRANS and Federal Highway Administration officials were reluctant to estimate what portion of the total excavation cost of \$12.8 million is attributable to digging the material from the borrow pits.

DWR officials advised us that if the canal is constructed, water would be cheaper to all users because (1) they purchased a portion of the canal's right-of-way at an early date, considering inflation, and (2) borrow pit excavations were completed in connection with I-5. They estimated a potential savings of \$5.3 million in construction costs (in 1970 dollars). The officials said DWR purchased about 10 miles of right-of-way between September 1969 and December 1977 at a cost of \$2.3 million. No Federal funds were involved in the purchase, according to DWR officials.

#### SCOPE OF REVIEW

We made our review at the Washington, D.C., headquarters of the Federal Highway Administration, Department of Transportation, and at the Bureau of Reclamation, Department of the Interior. We examined pertinent records, documents, and files and discussed matters covered in this report with Highway Administration and Reclamation officials. At the Highway Administration's Sacramento, California, division office, we examined records and held discussions with Highway Administration officials and representatives of California's Department of Transportation and Department of Water Resources. We also contacted representatives of several highway contracting firms familiar with the I-5 project.

CHRONOLOGY OF MAJOR EVENTS IN THE DEVELOPMENT  
OF THE 22-MILE I-5 SEGMENT IN  
SAN JOAQUIN AND SACRAMENTO  
COUNTIES, CALIFORNIA

<u>Date</u>	<u>Event</u>
November 7, 1957	FHWA authorized preliminary engineering for construction work.
April 21, 1960	State held public hearing covering I-5 sections in San Joaquin and Sacramento Counties.
April 13, 1961	Route location adopted by California Highway Commission and section declared a freeway.
January 5, 1962	State District Engineer's report on highway recognizes that substantial quantities of imported borrow material will be needed to construct embankments (from 3 to 11 feet above existing ground level) and waterways that would allow continuous traffic during major floods.
May 29, 1963	FHWA approved basic design features, with some exceptions.
May 20 and 22, 1964	FHWA authorized State to proceed with right-of-way acquisition.
May 23, 1967	State requested FHWA permission to designate Peripheral Canal as borrow site for the two I-5 segments to be constructed in San Joaquin County.
August 30, 1967	FHWA approved the Peripheral Canal as mandatory borrow site following series of correspondence with the State.

<u>Date</u>	<u>Event</u>
December 7, 1967	State requested FHWA approval to designate Peripheral Canal as mandatory borrow site for I-5 project in Sacramento County.
January 18, 1968	Interagency agreement signed by State Department of Public Works and Department of Water Resources. Agreement provided for advance of \$2 million for canal right-of-way acquisition in exchange for 7 million cubic yards of excavation material from the canal alignment. The excavations were to approximate canal dimensions. DWR agreed to maintain the excavations as fish rearing ponds until canal is approved.
January 22, 1968	FHWA approves State's 12-7-67 request.
September 23, 1968	FHWA authorized relocation assistance and payments for I-5 projects.
March 16, 1971	State and FHWA agree that State would prepare draft EIS on highway impact and that EIS would discuss canal as borrow source.
September 7, 1971	State sends out draft EIS for review and comment by interested individuals and organizations.
April 3, 1972	State transmits final EIS for FHWA approval.
June 5, 1972	FHWA approves final EIS after exchange of correspondence with State in which State accepted FHWA's suggestion to thoroughly discuss alternative borrow sources, other than Peripheral Canal. FHWA forwarded EIS to Council on Environmental Quality for approval.

<u>Date</u>	<u>Event</u>
July 18, 1972	FHWA advises State that all necessary environmental requirements have been completed for the I-5 project and that project may be advanced in the normal manner.
July 26, 1972	Private attorney representing environmentalists submits letter to Council on Environmental Quality opposing Peripheral Canal as highway borrow site taking exception to State's evaluation of available borrow material sources. Council on Environmental Quality forwards letter to FHWA for response.
February 7, 1973	FHWA responds to attorney's 7-26-72 letter. FHWA took no exception to State's evaluation of available borrow sources and alternatives.
September 6, 1973	FHWA approves the plans, specifications, and estimate for construction of a 7.8 mile segment of I-5 in San Joaquin County.
September 7, 1973	FHWA authorizes State to advertise for bids with stipulation that specific requirements be included in special provisions covering mandatory borrow site. Bids to be opened November 7, 1973.
October 30, 1973	Civil suit filed in U.S. District Court for the District of Columbia <u>1/</u> seeking order prohibiting use of canal site as highway borrow source.
December 3, 1973	Civil suit filed 10-30-73 voluntarily dismissed by plaintiffs without prejudice after U.S. District Court judge, Washington, D.C., recommended that case should be heard in California district court.

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1/Friends of the Earth v. Brinegar.

<u>Date</u>	<u>Event</u>
December 7, 1973	Civil suit filed in U.S. District Court, Northern District of California identical to original suit filed 10-30-73.
December 12, 1973	Bids opened for San Joaquin project (postponed from 11-7-73).
December 15, 1973 <u>1/</u>	FHWA concurs in State's rejection of all bids received for San Joaquin project as being excessively high. Bids to be readvertised and plans redesigned.
May 31, 1974	Ruling by U.S. District Court, Ninth District of California, permits the State of California to use borrow material from the Peripheral Canal site in constructing I-5. <u>2/</u>
August 1974 <u>1/</u>	Environmentalists appeal district court's decision to the Ninth Circuit Court of Appeals.
August 28, 1974	Bids opened for I-5 project in San Joaquin County (I-005-6(136)478) extending from Hammer Lane to 0.5 miles north of Eight Mile Road.
October 24, 1974	Contract for I-5 project opened for bids on 8-28-74 awarded to G.H.B. Co., Danville, California.
March 10, 1975	U.S. Court of Appeals, Ninth Circuit Court, upheld 5-31-74 decision of U.S. District Court. <u>3/</u>

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1/Date approximate.

2/Friends of the Earth v. Brinegar, Civ. No. 73-2184 (N. D. Cal., filed May 31, 1974).

3/Friends of the Earth v. Brinegar, Civ. No. 73-2184 (N. D. Cal., filed May 31, 1974), aff'd sub nom.; Friends of the Earth v. Coleman, Civ. No. 74-2755 (9th Cir., filed Mar. 10, 1975).

<u>Date</u>	<u>Event</u>
September 3, 1975	Bids opened for I-5 project in San Joaquin County (I-005-6(141)481) extending from 0.5 miles north of Eight Mile Road to State Route 12.
September 23, 1975	Contract for I-5 project opened for bids on 9-3-75 awarded to Piombo Corporation, San Carlos, California.
December 19, 1975	All work completed on I-5 project awarded 10-24-74.
November 22, 1976	All work completed on I-5 project awarded 9-23-75.
December 8, 1976	Bids opened for I-5 project in San Joaquin County (I-005-6(150)478), extending from Hammer Lane to Route 12, and on Route 12 from Guard Road to 1 mile west of Ray Road.
December 22, 1976	Bids opened for I-5 project in San Joaquin County (I-005-6(151)485) extending from State Route 12 to 0.1 mile south of Mokelumne River.
January 17, 1977	Contract for I-5 project opened for bids on 12-22-76 awarded to Novo-Rados Contractors, Chino, California.
January 31, 1977	Contract for I-5 project opened for bids on 12-08-76 awarded to Teichert Construction, Sacramento, California.
June 8, 1977	Bids opened for I-5 project in Sacramento County (I-005-6(154)495) extending from the Mokelumne River to Lambert Road.
June 28, 1977	Contract for I-5 project opened for bids on 6-8-77 awarded to Madonna Construction Company, San Luis Obispo, California.

CHRONOLOGY OF MAJOR EVENTS IN THE DEVELOPMENT  
OF THE PROPOSED  
PERIPHERAL CANAL PROJECT

<u>Date</u>	<u>Event</u>
November 8, 1960	California General Election ratifies State Water Resources Development Bond Act (also called Burns-Porter Act) which authorizes bond sale to finance existing water facilities of State Water Project and future development of additional "unspecified" delta water facilities and storage facilities.
September 15, 1961	Interagency Delta Committee formulated to define mutually acceptable plan for additional delta water facility development.
September 11, 1964	Committee's proposed plans transmitted to California Water Commission for review and comment, contains reference to a "Peripheral Canal" plan as one of four alternative plans.
November 6, 1964	Water Commission holds public hearings on Committee's plans.
January 20, 1965	Committee issues final report recommending Peripheral Canal concept as best alternative.
May 16, 1966	DWR issues Project Order No. 12 officially adopting Peripheral Canal as the delta water facility of the State Water Project.
January 18, 1968	State Public Works and Water Resources Departments sign interagency agreement to coordinate canal and I-5 project.

Date	<u>Event</u>
July 3, 1969	Bureau of Reclamation feasibility report on canal (a prerequisite to securing congressional authorization) was completed and submitted to interested agencies for review and comment.
April 28, 1970	California's Secretary for Resources submits letter to Secretary of the Interior recommending authorization and funding of Peripheral Canal by the Congress.
December 7, 1973	Civil suit <u>1/</u> filed opposing use of canal site as borrow source for I-5 projects.
May 31, 1974	Ruling by U.S. District Court, Ninth District of California, permits State of California to use borrow material from the Peripheral Canal site in constructing I-5. <u>2/</u>
August 1974	Environmentalists appeal district court's decision to Ninth Circuit Court of Appeals.
August 1974	DWR issues draft Environmental Impact Report on Peripheral Canal which assumed joint Federal and State funding.
March 10, 1975	U.S. Court of Appeals, Ninth Circuit, upheld 5-31-74 decision of U.S. Circuit Court. <u>3/</u>

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1/Friends of the Earth v. Brinegar.

2/Friends of the Earth v. Brinegar, Civ. No. 73-2184 (N. D. Cal., filed May 31, 1974).

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<u>Date</u>	<u>Event</u>
February 18, 1977	California senate bill (S.B.) 346 identifies the Peripheral Canal as the delta facility of the State Water Project and authorizes its construction, with provision for Federal participation.
June 23, 1977	S.B. 346 passed by California State Senate and sent to assembly.
September 9, 1977	California assembly passes S.B. 346, with amendments.
September 15, 1977	California senate approves amendments, but affirmative votes less than majority needed to send bill to Governor. Bill referred to joint conference committee. Conference committee schedules public hearings.
September 22, 1977	Bill introduced in U.S. Congress (H.R. 9258) to authorize the Secretary of the Interior to enter into certain agreements with the State of California to construct and operate the Peripheral Canal.
January 26, 1978	Conference committee approves report with suggested final amendments to S.B. 346.
February 1, 1978	Amended bill submitted to State senate for approval.
February 2, 1978	California senate voted 20 to 14 for amended bill but affirmative votes less than majority required to send bill to assembly. Senate agreed to a proposal to reconsider bill at later unspecified date.

SUMMARY OF 1-5 PROJECTS WHICH USED FULL MAJORITY (BORROW) FROM PERIPHERAL CANAL SITE

Location and Project No.	Amount of borrow (cu. yds.)	Cost (cu. yds.)	Total cost of roadway excavation (note a)	Estimated total cost of constructing project (millions)		Award date	Status at January 30, 1978	Length (miles)
				Estimated share of project total	Estimated share of State total			
<b>Sacramento County:</b>								
I-005-6(154)495	1,955,515	b/ \$1.30	\$2.54	\$11.69	\$11.00	6/26/77	25 per cent complete	4.71
<b>San Joaquin County:</b>								
I-005-6(136)478	1,550,600	c/ 2.11	3.27	7.25	6.63	10/24/74	Completed 12/19/75	3.12
I-005-6(141)481	1,660,719	d/ 1.30	2.08	3.95	3.37	9/23/75	Completed 12/22/76	3.78
I-005-6(150)478	208,317	e/ 0.50	0.10	7.37	1.22	1/31/77	Substantially complete pending FHMA's acceptance of contractor's work	6.90
I-005-6(151)485	3,679,210	f/ 1.30	4.78	18.25	16.56	1/17/77	45 percent complete	10.15
<b>Total</b>	<b>8,993,761</b>	<b>g/ \$1.30</b>	<b>\$12.77</b>	<b>\$48.51</b>	<b>\$43.70</b>			<b>28.66</b>

a/ Includes costs of excavating borrow material, loading, hauling, depositing, spreading, and compacting the material in place at the highway construction site, plus all labor, material, tools, and equipment used in doing the work.

b/ Nine contractors submitted bids ranging from \$1.20/cu. yd. to \$2.00/cu. yd., and averaging \$1.45/cu. yd.

c/ Three contractors submitted bids ranging from \$2.11/cu. yd. to \$3.98/cu. yd., and averaging \$2.76/cu. yd.

d/ Five contractors submitted bids ranging from \$0.93/cu. yd. to \$2.28/cu. yd., and averaging \$1.61/cu. yd.

e/ Seven contractors submitted bids ranging from \$0.50/cu. yd. to \$2.30/cu. yd., and averaging \$1.48/cu. yd.

f/ Nine contractors submitted bids ranging from \$1.25/cu. yd. to \$2.50/cu. yd., and averaging \$1.69/cu. yd.

g/ Average cost/cu. yds. for the five projects.

h/ Does not include costs of right-of-way acquisition and utility relocations.

i/ Does not add to actual segment length of 22 miles because some projects were overlapping.

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